

TOYGUN

ELECTRO-OPTICAL SENSOR SYSTEM

HD MWIR THERMAL SIGHTING WITH 2 AXIS MECHANICAL + 2 AXIS OPTICAL STABILISATION

SINGLE/MULTI TARGET TRACKING

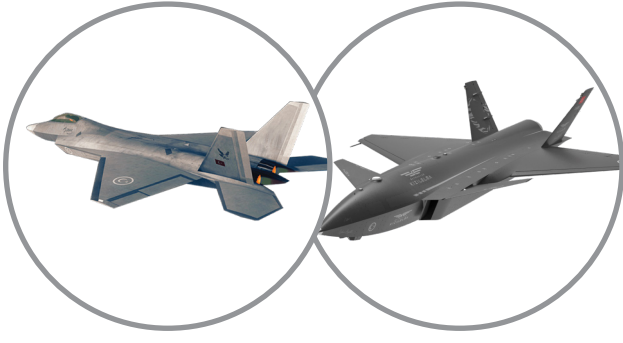
AUTOMATIC TARGET RECOGNITION

LASER RANGE FINDER AND TARGET DESIGNATOR

LASER SPOT TRACKER

TARGETING SYSTEM COMPATIBLE WITH AIR-AIR AND AIR-GROUND MISSIONS





TOYGUN

ELECTRO-OPTICAL SENSOR SYSTEM

TOYGUN is an electro optical sensor and targeting system designed for manned and unmanned fixed wing combat air platforms.

Applications

- Targeting
- Reconnaissance and Surveillance

Main Features

- Video Stream Creation:
 - MW Infrared Imaging: A high resolution (at least 1280x1024 resolution) thermal detector will be used in order for the system to perform imaging in the MWIR band.
 - Image Processing: Image enhancement (edge-corner smoothing, image sharpening, histogram equalization, black/white balancing, removing/minimizing fog, haze and atmospheric effects, superresolution, turbulence correcting and target evaluation) functions will be applied in the MWIR image channel. It will have moving and fixed target detection and tracking capability.
- Laser Designator: Laser designation can be done on the target in order to ensure that laser-guided ammunition hits the target precisely. Laser designation will be performed at a wavelength of 1064 nm and will comply with NATO STANAG 3733.
- Laser Range Finder: In order to provide the targets distance information, the laser will be able to perform the range finding mission. The target distance can be found accurately up to a distance of at least 35 km.
- Laser Point Tracker: It will be possible to detect and track the target designated/pointed by another platform.
- Internal Boresight: Without the need for external equipment; It will boresight the Laser Pointer and Laser Target tracking units according to the thermal image.
- Line of Sight Control: The line of sight will be directed and stabilization of the line of sight will be ensured according to the given coordinate, speed and position.

- Navigation and Target Position Estimation: Coordinates of a target located on earth will be calculated with the support of internal GPS/external INS/platform navigation data/internal inertial measurement unit.
 - Video Target Tracking: The system will keep moving and stationary targets in the middle of the image, calculate speed, orientation and coordinate information and share them with the outside world.
- Symbology Creation: Target, Orientation and Camera Status information will be displayed with text and graphics on the image outputs.
- External World Communication: There will be external interfaces for power, image transfer, GNSS Antenna, communication and control signals.

Technical Specification

HD IR Camera	Sensor Resolution: 1280x1024
	Wavelength: MWIR
Laser Range Finder and Target Designator	Wavelength: 1064 nm
	Range: up to 35 km
	Coding: NATO STANAG 3733
Power Interface	270 VDC
Power Consumption	1000 Watt
Size	Sensor Suit:
	Height: 710mm
	Width: 550mm
	Depth: 815mm
	Faceted Window:
	Height: 285.7mm
	Width: 618.4mm
	Depth: 800.3mm
Weight	Sensor Suit: 120 kg (max.)
	Faceted Window: 22 kg
Temperature	Operation: -40°C to +70°C